

**What is Claimed is:**

1. A method for isolating human neuroepithelial precursor cells from human fetal tissue comprising:

5 (a) culturing human fetal cells in fibroblast growth factor and chick embryo extract; and  
(b) immunodepleting from the cultured human fetal cells any cells expressing A2B5, NG2 and ENCAM so that an isolated population of human neuroepithelial precursor cells remains.

10 2. A method for transplanting an isolated population of human neuroepithelial precursor cells into an animal comprising:

15 (a) isolating human neuroepithelial precursor cells from human fetal tissue in accordance with the method of claim 1; and  
(b) transplanting the isolated human neuroepithelial precursor cells into the central nervous system of an animal.

20 3. A nonhuman animal model for study of transplantation of human neural stem cells into the central nervous system comprising a nonhuman animal transplanted with human neuroepithelial precursor cells isolated in accordance with the method of claim 1.

25 4. A method for monitoring survival, proliferation, differentiation and migration of human neuroepithelial precursor cells in the animal model of claim 3 comprising detecting human specific NCAM, GFAP, human nuclear antigen and human mitochondria in the animal model.

F07360-539CT360